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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/663,662	09/15/2000	Yang Gao	10508.28 99RSS485	2184

25700 7590 01/19/2005

FARJAMI & FARJAMI LLP  
26522 LA ALAMEDA AVENUE, SUITE 360  
MISSION VIEJO, CA 92691

EXAMINER
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OPSASNICK, MICHAEL N

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 01/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/663,662

Applicant(s)

GAO ET AL.

Examiner

Michael N. Opsasnick

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-9,34-41 and 52-63 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-9,34-41 and 52-63 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2-9, 34-41, 52-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manjunath et al (6691084) in view of Aoyagi et al (5974375).

As per claims 2,34, Manjunath et al (6691084) teaches a fixed rate speech compression system for processing a frame of a speech signal (as coding of speech, albeit at differing rates, but based on the classification of the frame, a fixed rate for that particular classification -- col. 1, lines 5-10) comprising:

“an encoder operable.....encoding” as encoding based upon initial parameter calculation and classification (Fig. 2.3)

“the common frame.....pitch preprocessing.....classification of the frame” as pitch encoding module (Fig. 7a), based on the determination of the frame (col. 15 lines 50-55), referring to the CELP mode (col. 16 lines 12-47).

“the encoder operable to select.....second part of the frame” as within a single frame, the frame divided into subframes (fig. 12), wherein the first part of the frame is based on a previous prototype residual (coded based upon that residual information –

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choosing from a plurality of modes), a second part subframe filled in by alignment and interpolation (the second choosing from a plurality of modes), and the last part of the frame containing the current prototype residual (the third choosing of a plurality of modes) – fig. 12, and col. 21 lines 15-65).

As per claims 2, 34, Manjunath et al (6691084) does not explicitly teach the use of a two-dimensional vector quantization code (and two dimensional code vector), however, Aoyagi et al (5974375) teaches a 2 dimensional codebook (Aoyagi et al (5974375), col. 8 lines 14-16). Therefore, it would have been obvious to one of ordinary skill in the art of speech coding to modify the codebook structure of Manjunath et al (6691084) with a two dimensional codevector because it would advantageously provide more precise coding (Aoyagi et al (5974375), col. 8 lines 35-43).

As per claims 3,36, Manjunath et al (6691084) teaches pitch time warping based on the strength of the signal (col. 22 line 15 – col. 23 line 35).

As per claims 4,39, Manjunath et al (6691084) teaches time warping delay range less than or equal to an L of 80 (col. 22 lines 30-60)

As per claim 5, Manjunath et al (6691084) teaches sinc filters (col. 22 lines 35-38)

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As per claims 6,40, Manjunath et al (6691084) teaches voiced, unvoiced, or transient (col. 5 lines 44-51).

As per claims 7,41, Manjunath et al (6691084) teaches voiced category (col. 5 lines 44-51)

As per claims 8,38, Manjunath et al (6691084) teaches background noise classification (col.2 lines 25-30)

As per claims 9,37, Manjunath et al (6691084) teaches pitch preprocessing with time delay (col. 16 lines 31-66) wherein these factors are based upon the previous frame parameters (col. 16 lines 65-66), wherein the previous frame can be the unvoiced category (col. 15 lines 44-57).

As per claim 35, Manjunath et al (6691084) teaches pitch correlator and information (Fig. 9a).

As per claims 52,55,58, the combination of Manjunath et al (6691084) in view of Aoyagi et al (5974375) teaches both 14 and 21 bits → up to 80 bits for the codebook parameters (Aoyagi et al (5974375) – fig. 18; vector incorporated into Manjunath, as presented above in claim 2).

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As per claims 53,56,59,62, the combination of Manjunath et al (6691084) in view of Aoyagi et al (5974375) multiple dimension vectors (Aoyagi et al (5974375) – col. 8, lines 15-32; vector incorporated into Manjunath, as presented above in claim 2).

As per claims 54,60, Manjunath et al (6691084) teaches near 4kbit/s systems (as vocoders well known in the art, col. 1 lines 30-42).

As per claims 57,63, Manjunath et al (6691084) teaches fixed and adaptive codebooks (col. 17 line 55- col. 19 line 30; col. 19 line 55 – col. 20 line 20).

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 2-9,34-41,52-63 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**5. Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 872 9314,

(for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

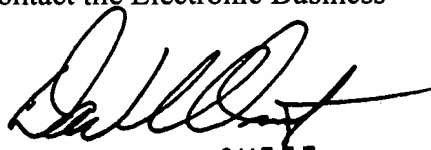
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (703)305-4089, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To, can be reached at (703)305-4827. The facsimile phone number for this group is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 2600 receptionist whose telephone number is (703) 305-4750, the 2600 Customer Service telephone number is (703) 306-0377.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mno  
1/15/2005



DAVID L. OMETZ  
PRIMARY EXAMINER